



Translation

EC-Type Examination Certificate

(1)

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(2)

**- Directive 94/9/EC -
Equipment and protective systems intended for use
in potentially explosive atmospheres**

(3)

BVS 07 ATEX E 001 X

(4)

Equipment: Electrical Thermometer type (A)LEXI-*-*-*-*-*

(5)

Manufacturer: Herth GmbH

(6)

Address: 59368 Werne, Germany

(7)

The design and construction of this equipment and any acceptable variation thereto are specified in the schedule to this type examination certificate.

(8)

The certification body of DEKRA EXAM GmbH, notified body no. 0158 in accordance with Article 9 of the Directive 94/9/EC of the European Parliament and the Council of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the test and assessment report BVS PP 07.2065 EG.

(9)

The Essential Health and Safety Requirements are assured by compliance with:

EN 60079-0:2006	General requirements	EN 61241-0:2006	Dust explosion protection
EN 60079-11:2007	Intrinsic safety 'i'		General requirements
EN 60079-26:2004	Equipment Group II Category 1G	EN 61241-11:2006	Protection by IS
EN 50303:2000	Equipment Group I Category M1		

(10)

If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11)

This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to Directive 94/9/EC.
Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate

(12)

The marking of the equipment shall include the following:



I or II extended with the applicable category- and type of protection-marking; see tables in 15.1.2

DEKRA EXAM GmbH

Bochum, dated 28. June 2007

Signed: Migenda

Signed: Dr. Wittler

Certification body

Special services unit





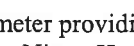
(13) Appendix to

(14) **EC-Type Examination Certificate**

BVS 07 ATEX E 001 X

(15) 15.1 Subject and type

15.1.1 Type code

Electrical Thermometer type	ALEXI-***-***-***	
Electrical Thermometer type	LEXI-***-***-***	
Cable sensor IS		cable length in m
Number of sensors		number of wires
Sensor type		interconnection cable
Sensor coating material		Sensor-length in mm
		Sensor-diameter in mm
Sensor type	Resistance-thermometer providing positive temperature coefficient: Marking letter Pt ...; Ni ...; H ...	
	Thermocouple: marking letter "K, J, L, N, T, E, S, B, U, R" (thermoelectric couple)	
Coating material:	stainless steel: marking letter "A"; Inconel: marking letter "B"; special metallic material: "C"	
Interconnection cable:	Thermo plastics (PVC):	marking letter "A"
	Fluor-polymer (PTFE, ETFE, Teflon):	marking letter "B"
	Silicon, Silicon material:	marking letter "C"
	Inorganic isolating material (glass silk, ceramic):	marking letter "D"
	Additional marking for shield , screen:	
	Copper wire mesh (screen):	marking letter "Cu"
	Steel wire mesh (shield):	marking letter "S"

15.1.2 The allocation of different versions of the electrical thermometer to equipment category and marking according to the applied standards is listed in the following table:

Electrical Thermometer type	Equipment category	Marking according to applied standards
ALEXI-*.Pt.../Ni.../H...-***-***-*** ALEXI-*.K/J/L/N/T/E/S/B/U/R-***-***-*** ALEXI-*.Pt.../Ni.../H...-***-***-*** ALEXI-*.K/J/L/N/T/E/S/B/U/R-***-***-*** LEXI-*.Pt.../Ni.../H...-***-***-***; LEXI-*.K/J/L/N/T/E/S/B/U/R-***-***-***; LEXI-*.Pt.../Ni.../H...-***-***-***; LEXI-*.K/J/L/N/T/E/S/B/U/R-***-***-***;	1/2G M2	Ex ia IIC T3 / T4 / T5 / T6 Ex ia I
ALEXI-*.Pt.../Ni.../H...-***-***S-*** ALEXI-*.K/J/L/N/T/E/S/B/U/R-***-***S-*** LEXI-*.Pt.../Ni.../H...-***-***S-*** LEXI-*.K/J/L/N/T/E/S/B/U/R-***-***S-***	1G M1	Ex ia IIC T3 / T4 / T5 / T6 Ex ia I

15.3.3 Temperature measuring range:

Thermocouple	-50 °C ≤ T ≤ 450 °C
Resistance thermometers	-200 °C ≤ T ≤ 450 °C

15.3.4 Versions intended for use in areas requiring category 1D or 2D equipment

- Versions fitted with one or „x“ Pt..., Ni... or H...

(type ALEXI-* - Pt.../Ni.../H...-*-*-*S-*-* / LEXI-* - Pt.../Ni.../H...-*-*-*S-*-*)

2-wire, 3-wire, 4-wire or „x“-times 2-wire, „x“-times 3-wire, „x“-times 4-wire measuring circuit

Voltage	U _i	AC/DC	30	V
Power	P _i		550/650/750	mW) ²
Effective internal capacitance (wire/wire)	C _i		150	pF/m) ¹
	(wire/screen)	C _i	200	pF/m) ¹
Effective internal inductance	L _i		15	μH/m) ¹

Ambient temperature range:	-40 °C ≤ T _a ≤ +40 °C (P _i = 750 mW)
	-40 °C ≤ T _a ≤ +70 °C (P _i = 650 mW)
	-40 °C ≤ T _a ≤ +100 °C (P _i = 550 mW)

)¹ Parameters of the permanently connected cable

)² in case of „x“-times Pt..., Ni... or H...sum of values

- Versions fitted with one or „x“ thermocouples

(type ALEXI-* -K/J/L/N/T/E/S/B/U/R-*-*-*S-*-* / LEXI-* K/J/L/N/T/E/S/B/U/R-*-*-*S-*-*)

Voltage	U _i	AC/DC	30	V
	U _o	(200 °C)	15	mV
Power	P _i		550/650/750	mW
Effective internal capacitance (wire/wire)	C _i		150	pF/m) ¹
	(wire/screen)	C _i	200	pF/m) ¹
Effective internal inductance	L _i		15	μH/m) ¹

Ambient temperature range:	-50 °C ≤ T _a ≤ +40 °C (P _i = 750 mW)
	-50 °C ≤ T _a ≤ +70 °C (P _i = 650 mW)
	-50 °C ≤ T _a ≤ +100 °C (P _i = 550 mW)

)¹ Parameters of the permanently connected cable

15.3.5 Isolation of the measuring circuit versus sensor coating (all versions)

Versions Ø less than 1 mm:	DC 60 V
Versions Ø > 1 mm < 3 mm:	DC 100 V, 2 thermoelectric couples: DC 60 V
Versions Ø > 3 mm < 7.9 mm:	DC 500 V, 2 thermoelectric couples: DC 250 V,
	3 thermoelectric couples: DC 100 V
Versions Ø ≥ 8 mm:	DC 500 V, 2 thermoelectric couples: DC 500 V,
	3 thermoelectric couples: DC 100 V

(16) Test and assessment report
BVS PP 07.2065 EG as of 28.06.2007

(17) Special conditions for safe use

If protective enclosures or coating materials marked with "C", indicating special materials, are used, the enclosure material shall comply with clause 7.3.2 or clause 8 of EN 60079-0:2006, or clause 6 of EN 61241-0:2006 for 1D, 2D application respectively.

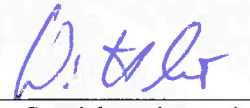
We confirm the correctness of the translation from the German original.
In the case of arbitration only the German wording shall be valid and binding.

44809 Bochum, 28.06.2007
BVS-Scha/Mi A 20040351

DEKRA EXAM GmbH



Certification body



Special services unit